

### REMARKS

In the office action, claims 1 and 17 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 3,778,730 (to Cromwell et al.); claims 2 - 14 and 16 - 20 were rejected under 35 U.S.C. § 103(a) over Cromwell et al. in view of U.S. Patent No. 4,614,914 (to Hofer); and claim 21 was indicated as being allowable if re-written in independent form.

Applicants' invention is directed to a power amplifier system that includes a plurality of amplifiers, each of which includes an input that is commonly coupled to a system input port, and a plurality of primary transformer windings, each of which is coupled to an output of one of the plurality of amplifiers as claimed in claim 1.

The Cromwell et al. reference does not disclose, teach or suggest the use of a plurality of amplifiers that are coupled to a plurality of primary transformer windings. The Cromwell et al. reference appears to disclose a telephone ringing generator circuit that includes an oscillator circuit 33, control circuitry 26 and a plurality of primary transformer windings 20 - 22. The oscillator circuit includes an amplifier 34, and during a positive half of the cycle, transistor 28 is turn on, causing a voltage to be present over primary transformer windings 20 and 21. During a negative half of the cycle, transistor 29 is turn on, causing a voltage to be present over primary transformer windings 21 and 22. Winding 23 is understood to be used for feedback purposes.

The circuit of Cromwell et al. does not include a plurality of amplifiers, and does not teach or suggest the use of a plurality of amplifiers to drive the windings 20 - 22 because it is necessary to the operation of the circuit of Cromwell et al. that the windings 20 and 21 be driven oppositely to the windings 21 and 22. This is specifically

accomplished in Cromwell et al. through the use of a single amplifier 34.

The subject matter of independent claim 1, therefore, is not disclosed, taught or suggested in Cromwell et al. in combination with any of the references of record. Claim 1, therefore, is submitted to be in condition for allowance.

Independent claim 17 as amended is directed to a power amplifier system that includes first and second power amplifiers that are coupled to first and second primary transformer windings. For the reasons discussed above, the subject matter of claim 17, therefore, is not disclosed, taught or suggested in Cromwell et al. in combination with any of the references of record. Claim 17, therefore, is submitted to be in condition for allowance.

Independent claims 10, 12 and 16 were rejected under § 103(a) over Cromwell et al. in view of Hofer. Hofer appears to disclose a transformer-coupled circuit in which an output signal is provided via a first primary winding 58 using a main amplifier 36 (shown in Figure 5). The output signal includes a fundamental signal and a distortion signal. The potential at winding 60 is not added to but subtracted from the potential at winding 58 due to the reversing of the phase of the signal at the output of the amplifier 36 by the output of the inverting amplifier 66, and then applied to the dotted node of the winding 60. Two out of phase signals, therefore, are applied to the dotted nodes of primaries 58 and 60. The fluxes generated by these two inputs are in opposite directions and cancel each other. The primary winding 78 and 80 shown in Figure 6 are connected in a magnetically null relationship and provide a resistance that matches the resistance of the primary winding 58 without having any magnetic coupling to the remaining windings.

Any combination of the teachings of Cromwell et al. and Hofer, therefore, would at best provide a single amplifier driving the transformer, not a circuit with a plurality of amplifiers and a plurality of primary transformer windings.

Independent claim 10 requires a plurality of  $m$  amplifiers and a plurality of  $m$  primary transformer windings. Independent claim 12 as amended requires at least two amplifiers and a plurality of primary transformer windings. Independent claim 16 requires a plurality of amplifiers and a plurality of primary transformer windings. Each of independent claims 10, 12 and 16 is therefore also considered to be in condition for allowance.

Dependant claims 2 - 9, 18, 20 and 21 depend from claim 1, dependent claim 11 depends from claim 10, and dependent claims 13, 14 and 19 depend from claim 12. Each of claims 1 - 14 and 16 - 21 is considered, therefore, to be in condition for allowance.

Applicants submit, therefore, that each of claims 1 - 14 and 16 - 21 is in condition for allowance. Favorable action consistent with the above is respectfully requested.

Respectfully submitted,



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